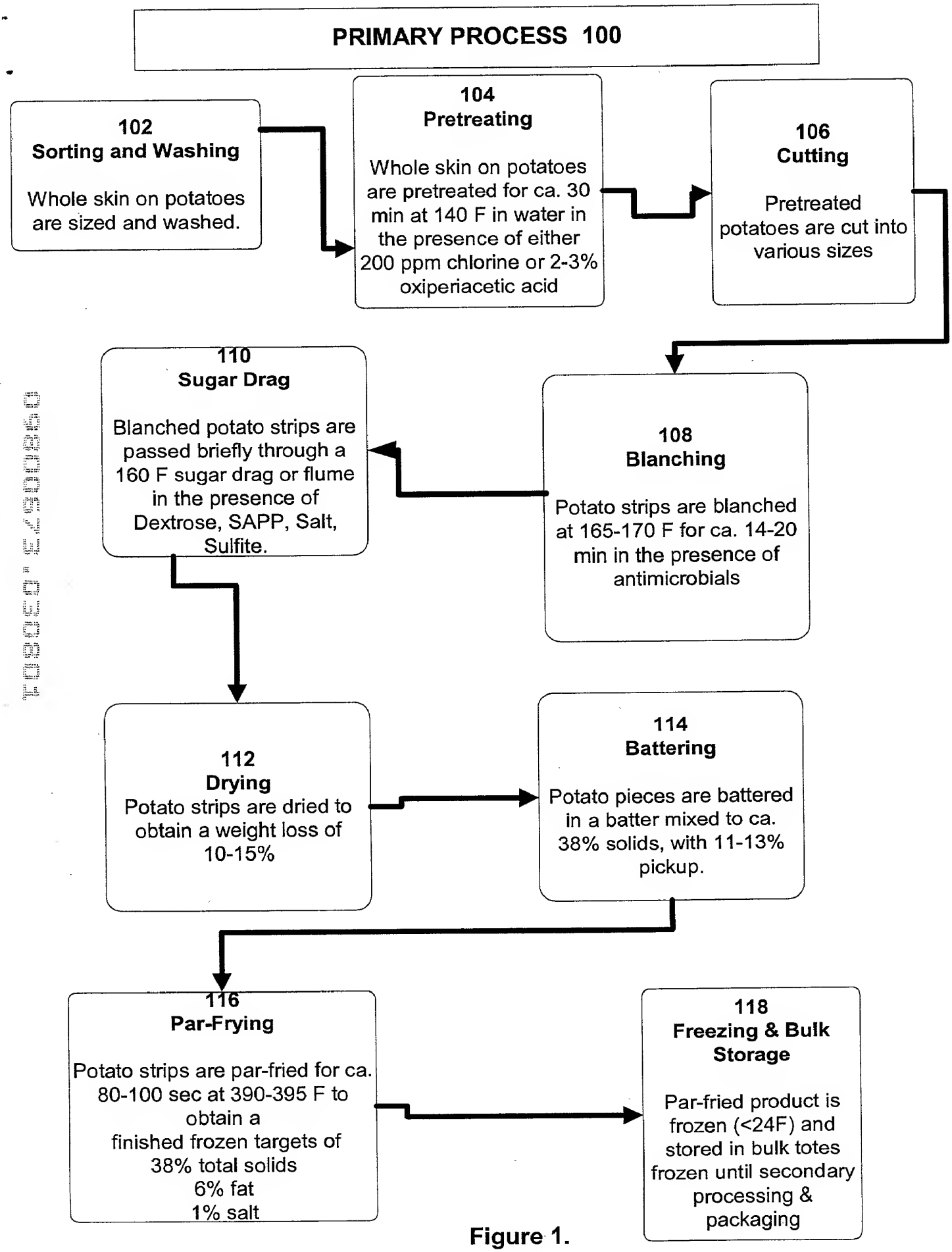
PRIMARY PROCESS 100
102
Sorting and Washing
Whole skin on potatoes are sized and washed.
104
Pretreating
Whole skin on potatoes are pretreated for ca. 30 min at 140 F in water in the presence of either 200 ppm chlorine or 2-3% oxiperiacetic acid
106
Cutting
Pretreated potatoes are cut into various sizes
108
Blanching
Potato strips are blanched at 165-170 F for ca. 14-20 min in the presence of antimicrobials
110
Sugar Drag
Blanched potato strips are passed briefly through a 160 F sugar drag or flume in the presence of Dextrose, SAPP, Salt, Sulfite.
112
Drying
Potato strips are dried to obtain a weight loss of 10-15%
114
Battering
Potato pieces are battered in a batter mixed to ca. 38% solids, with 11-13% pickup.
116
Par-Frying
Potato strips are par-fried for ca. 80-100 sec at 390-395 F to obtain a finished frozen targets of 38% total solids 6% fat 1% salt
118
Freezing & Bulk Storage
Par-fried product is frozen (<24F) and stored in bulk totes frozen until secondary processing & packaging

Figure 1.

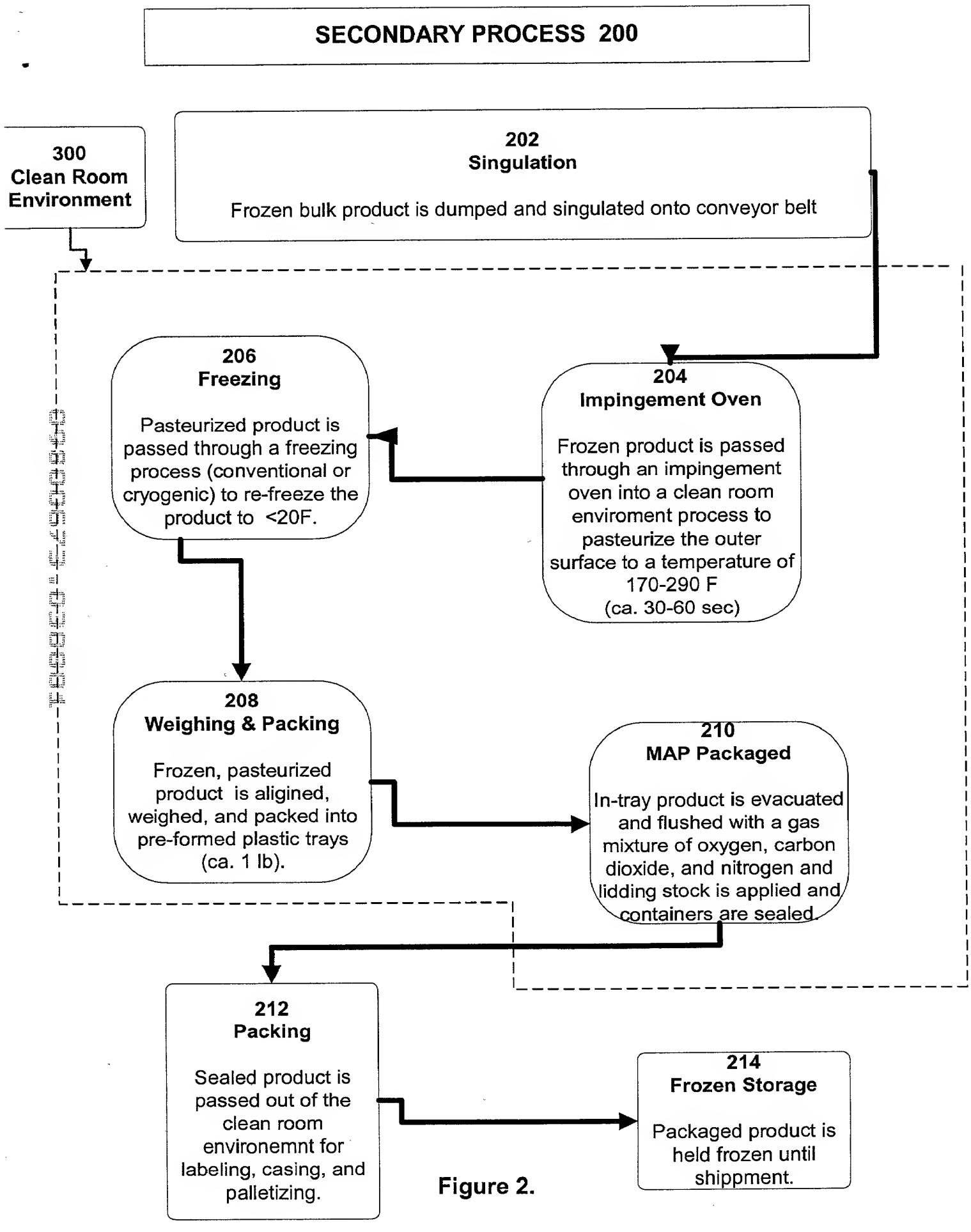
SECONDARY PROCESS 200
300
Clean Room
Environment
202
Singulation
Frozen bulk product is dumped and singulated onto conveyor belt
206
Freezing
Pasteurized product is passed through a freezing process (conventional or cryogenic) to re-freeze the product to <20F.
204
Impingement Oven
Frozen product is passed through an impingement oven into a clean room enviroment process to pasteurize the outer surface to a temperature of 170-290 F
(ca. 30-60 sec)
208
Weighing & Packing
Frozen, pasteurized product is aligined, weighed, and packed into pre-formed plastic trays (ca. 1 lb).
210
MAP Packaged
In-tray product is evacuated and flushed with a gas mixture of oxygen, carbon dioxide, and nitrogen and lidding stock is applied and containers are sealed.
212
Packing
Sealed product is passed out of the clean room environemnt for labeling, casing, and palletizing.
214
Frozen Storage
Packaged product is held frozen until shippment.

Figure 2.